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Two new species of the genus *Naevius* Roth

(Arachnida, Araneae, Desidae)

By Antonio Domingos Brescovit & Alexandre Bragio Bonaldo

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Two new species of the genus *Naevius* are described: *N. zongo* from Bolivia and *N. manu* from Peru. The placement of *Naevius* in Dictynoidea is confirmed by tracheal morphology, and some characters are added to the original description of the genus.

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Introduction

Naevius was proposed by Roth (1967) in the family Agelenidae, subfamily Cybaeinae. Until now, the genus contained only the type species, *N. varius*, described by Keyserling (1880) from Peru and originally assigned to *Cybaeus* L. Koch. The genus was transferred to the family Amaurobiidae and included in the subfamily Desinae by Lehtinen (1967), who suggested that *Naevius* could be a relative of the Chilean genus *Porteria* Simon.

Forster (1970), in a different concept from that of Lehtinen, considered the genera *Desis* and *Matachia* to belong to the subfamily Desinae, in the newly ranked family Desidae. Forster did not propose any placement of the other genera attributed to the subfamilies Desinae and Matachiinae of Lehtinen's Amaurobiidae. Thus, the catalog of Brignoli (1983) showed *Naevius* listed under Desidae incertae sedis, together with those genera included in Lehtinen's Desinae and Matachiinae that were not transferred to other families by recent authors.

The present paper reports two new species of *Naevius*: *N. zongo*, collected during a recent expedition to Bolivia (see Höfer & Brescovit 1994) and *N. manu* from Peru.

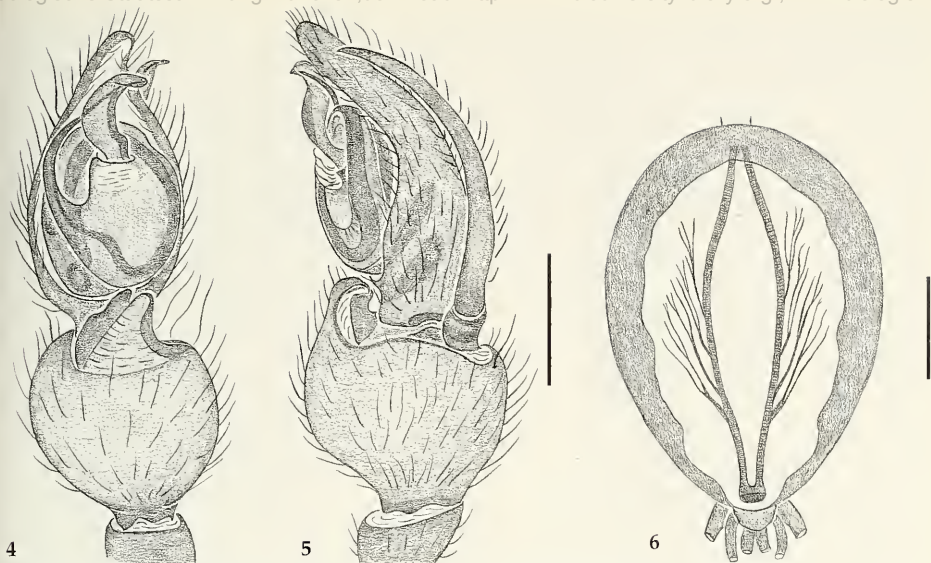
Little can be done on the family level without a better evaluation of the other genera incertae sedis, currently listed in Desidae. Nevertheless, examination of the tracheal system of a juvenile of *N. zongo* (Fig. 6) showed a branched pattern similar to that present in the New Zealand cribellate genus *Notomatachia*, one of Forster's desids sensu strictu (see Forster 1970: fig. 4). The branched tracheal system has been regarded as a synapomorphy of the superfamily Dictynoidea (Coddington 1990: p. 6), where Desidae is currently placed. Thus, our study confirms that *Naevius* is a dictynoid genus but the hypothesis that it belongs to the same family as *Desis*, first suggested by Lehtinen (1967), cannot be corroborated by this single character.

The two new species herein described present the large movable dorsal tibial apophysis in the male palp, mentioned by Roth (1967) for *N. varius*. The exclusiveness of this character qualifies it as an apomorphy of the genus.

The material examined is deposited in the following collections: Museu de Ciências Naturais, Fundação Zoobotânica do Rio Grande do Sul, Porto Alegre (MCN, curator: E. H. Buckup) and Museo de Historia Natural da Universidade Nacional Mayor de San Marcos, Lima (MUSM, curator: D. Silva D.). The format of descriptions and abbreviations follows Brescovit & Bonaldo (1992). Measurements are in mm.



Figs 1-3. *Naevius zongo*, spec. nov., ♀. 1. Tarsal organ. 2. Tarsal trichobothrium. 3. Leg I, tarsal claws (arrow on unpaired claw).



Figs 4-5. *Naevius manu*, spec. nov, ♂ palp. 4. Ventral view. 5. Retrolateral view.
 Fig. 6. *Naevius zongo*, spec. nov, juvenile. Tracheal system, dorsal view. Scale lines: 0.25 mm.

Morphology

Some features, not reported in the original description of the genus, are supplemented here. The tarsal organ is located on distal third of the tarsus and presents an elongate orifice (Fig. 1). The trichobothria occur in two rows on the tibiae and one row on the metatarsi and tarsi; the trichobothrial bases have a subtriangular, elongate plate with a semicircular rim and fine, longitudinal ridges (Fig. 2). The unpaired tarsal claw is almost as long as the paired claws (Fig. 3). The tracheal system of a juvenile of *N. zongo* extends into the cephalothorax and is composed by two strong trunks, each one branching to four lateral tracheoles (Fig. 6). In females of *N. zongo*, the epigynal lips has the posterior internal border folded (Fig. 10). They apparently support the male embolus during copulation. The illustration of the ventral view of the epigynum of *N. varius*, supplied by Roth (1967: pl. 51, fig. 17), suggests that this feature is not an autapomorphy of *N. zongo* and may be shared by all *Naevius* species.

Taxonomy

Naevius manu, spec. nov. Figs 4, 5

Types. Holotype: ♂, Paucartambo-Pilcopata road, National Park Manu, Cuzco, Peru, Febr. 19. 1990, D. Silva col. (MUSM). – Paratypes: 2♂♂, same data (MUSM, MCN no. 25786).

Diagnosis. *Naevius manu* is a distinctive species, easily recognized by the dilated, almost spherical tibiae of the male palp (Figs 4, 5).

Descripton

Male holotype. Carapace pale orange; mouthparts orange; sternum yellow; legs pale orange, metatarsi and tarsi darker; abdomen yellow, with white pigmentation; dorsum with small black longitudinal median stripe on anterior third; posterior end of dorsum darkened, with two pairs of black spots; venter with three black longitudinal stripes.

Total length 3.30. Carapace 1.55 long, 1.25 wide. Clypeus 0.12 high. Eye diameters and interdistances: AME 0.05, ALE 0.10, PME 0.11, PLE 0.12; AME-AME 0.03, AME-ALE 0.02, PME-PME 0.08, PME-PLE 0.07, AME-PLE 0.05. MOQ length 0.21, front width 0.15, back width 0.28. Chelicerae with 3 promarginal teeth and 4 retromarginal denticles. Abdomen: 1.70 long.

Leg measurements: I: femur 1.45, patella 0.55, tibia 1.30, metatarsus 1.30, tarsus 0.80, total 5.40. II: 1.30, 0.50, 1.10, 1.20, 0.65, 4.75. III: 1.20, 0.50, 0.85, 1.20, 0.45, 4.20. IV: 1.45, 0.50, 1.10, 1.40, 0.50, 4.95. Leg spination: tibia I d1-0-1, p1-1-1, v2-2-0, r0-1-1. II d1-0-1, p0-1-1, v2-2-0, r0-1-1. III d1-1-0, p0-1-1, v1p-2-2, r0-1-1. IV d1-0-1, p0-1-1, v1p-1p-2, r0-1-1; metatarsus I-IV d1-1-0, p1-1-2, v2-2-1, r1-1-2. Palp: patellae without apophysis; tibiae very dilated, with ventral, apical, bifid apophysis, enlarged at base (Fig. 4) and dorsal, curved movable apophysis, as long as cymbium (Fig. 5). Embolus arising from prolateral side of tegulum. Conductor not enlarged at base, curved, embracing distal third of embolus (Fig. 4).

Female. Unknown.

Variation. Three males: total length 3.25-3.40; carapace 1.55-1.70; femora I 1.40-1.55. The MUSM paratype has only one pair of posterior black dorsal spots on the abdomen. The MCN paratype has a broad black longitudinal stripe on the abdominal dorsum.

Distribution. Known only from the type locality.

Etymology. The specific name is a noun in apposition taken from the type locality.

Material examined. Only the types.

Naevius zongo, spec. nov.

Figs 1-3, 6-10

Types. Holotype: ♂, Vale de Zongo, La Paz, Bolivia, Aug. 05, 1993, A. D. Brescovit col. (MCN No. 25784). – Paratypes: 2♀, same data (MCN No. 25785).

Diagnosis. *Naevius zongo* differs from *N. varius* (see Roth 1967: pl. 51, figs 16-18) by the presence of a voluminous, elongated and bifid patellar apophysis on the male palp (Figs 7, 8) and the elongated and large posterior lips of the female epigynum, with a narrow notch on the posterior edge (Fig. 9).

Description

Male holotype. Carapace pale olive, darker at borders and on broad median longitudinal stripe; mouthparts pale olive; legs pale olive, with few dark spots; sternum dark olive; abdomen pale olive, dorsum with black longitudinal median stripe on anterior third and abundant white pigmentation; each side of abdomen with black longitudinal stripe, medially interrupted.

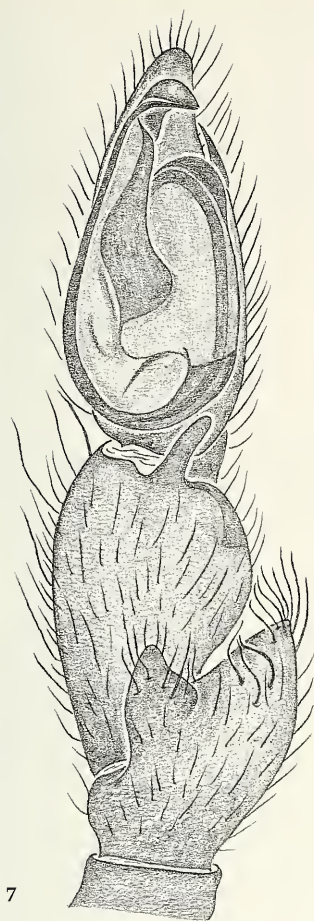
Total length 2.75. Carapace 1.40 long, 1.10 wide. Clypeus 0.12 high. Eye diameters and interdistances: AME 0.03, ALE 0.09, PME 0.11, PLE 0.11; AME-AME 0.03, AME-ALE 0.03, PME-PME 0.08, PME-PLE 0.10, AME-PLE 0.08. MOQ length 0.22, front width 0.11, back width 0.26. Chelicerae with 3 promarginal teeth and 4 contiguous retromarginal denticles. Abdomen 1.50 long.

Leg measurements: I: femur 1.40, patella 0.47, tibia 1.17, metatarsus 1.25, tarsus 0.77, total 5.06. II: 1.10, 0.47, 0.92, 1.10, 0.60, 4.19. III: 0.92, 0.47, 0.72, 1.10, 0.50, 3.71. IV: 1.22, 0.47, 0.87, 1.25, 0.57, 4.38. Leg spination: tibia I d0-1-0, p1-1-1, v0-2-0, r1-1-1. II d1-1-0, p0-1-1, v0-1r-0, r0-1-1. III-IV d0-1-0, p0-1-1, v0-1p-2, r1-1-1; metatarsus: I d0-1-0, p0-1-2, v2-2-2, r0-1-2; II d1-1-0, p1-1-2, v2-2-1, r1-1-2; III-IV d0-1-1, p1-1-2, v2-1-1, r1-1-2. Palp: patella with voluminous, bifid retrolateral apophysis (Figs 7, 8). Tibia with elongated, narrow ventral apical apophysis (Fig. 7); and dorsal, curved movable apophysis, as long as cymbium (Fig. 8). Embolus long, arising from retrolateral base of tegulum. Conductor long, enlarged at base, with hook-shaped tip, embracing distal part of embolus (Fig. 7).

Female paratype. Coloration as in male, except legs with many dark spots and abdomen with predominance of black pigment.

Total length 3.65. Carapace 1.55 long, 1.15 wide. Clypeus 0.10 high. Eye diameters and interdistances: AME 0.06, ALE 0.10, PME 0.11, PLE 0.10; AME-AME 0.03, AME-ALE 0.03, PME-PME 0.08, PME-PLE 0.11, ALE-PLE 0.06. MOQ length 0.22, front width 0.15, back width 0.28. Chelicerae with 3 promarginal teeth and 4 retromarginal denticles. Abdomen 2.20 long.

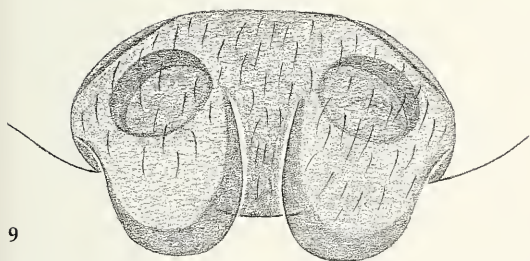
Leg measurements: I: femur 1.25, patella 0.50, tibia 1.10, metatarsus 1.20, tarsus 0.65, total 4.70. II:



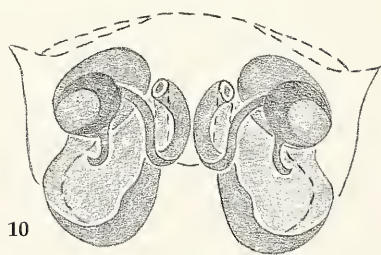
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Figs 7-10. *Naevius zongo*, spec. nov. 7-8. ♂ palp. 7. Ventral view. 8. Retrolateral view. 9-10. ♀ epigynum. 9. Ventral view. 10. Dorsal view. Scale lines: 0.25 mm.

I. 1.0, 0.45, 0.85, 1.00, 0.55, 3.95. III: 1.05, 0.40, 0.70, 0.95, 0.45, 3.55. IV: 1.20, 0.50, 0.95, 1.20, 0.55, 4.40. Leg spination: tibia I d1-0-0, p1-1-1, v2-2-0, r0-1-1. II d1-1-0, p0-1-1, v1r-2-0, r0-1-1. III d1-1-0, p1-2-2, v2-2-1, r1-2-2. IV d1-1-0, p0-1-1-1, v0-1p-1p, r0-1-1; metatarsus I d0, p1-2-2, v2-2-1, r1-2-2. II d0-1-0, p1-1-2, v2-2-1, r1-1-2. III d1-1-0, p0-1-1, v0-1p-0, r0-1-1. IV d0-1-0, p1-2-1, v2-2-2, r1-2-2. Epigynum: epigynal plate with elongated and rounded lips, overlapping epigastric furrow, forming narrow notch on posterior edge (fig. 9). Internal border of lips folded. Two anterior oval spermathecae, connected with narrow, sinuous copulatory ducts. Fertilization ducts short, curved (Fig. 10).

Variation. Two females: total length 3.35-3.65; carapace 1.50-1.55; femora I 1.25-1.35.

Natural history. The specimens were collected in small bushes, at an altitude of 3.200 m, in the "humid puna" (for a detailed description of this vegetation, see Morales 1990; for a photographic illustration of the site, see Höfer & Brescovit 1994: pl. 4, fig. c).

Distribution. Known only from the type locality.

Etymology. The specific name is a noun in apposition taken from the type locality.

Material examined. Only the types.

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